infrastructure, including dark fiber loops, established during the period of monopoly control, gives ILECs a nearly insurmountable competitive advantage:

> A newcomer could not compete with the incumbent carrier to provide local service without coming close to replicating the incumbent's entire existing network, the most costly and difficult part of which would be laying down the 'last mile' of feeder wire, the local loop, to the thousands (or millions) of terminal points in individual houses and businesses.[86]

The FCC recognized three years ago in the *UNE Remand Order*, as did the Supreme Court more recently, that duplication of the ILEC's ubiquitous network is impractical in the near term. In fact, as pointed out by Sprint, only 3% of the nation's lines are served by CLECs on their own last mile facilities.[87] Accordingly, dark fiber loops constitute an essential facility and even under the most rigorous interpretation of the section 251(d)(2) impair standard and the *USTA Decision*, the ability of CLECs to provide services is materially diminished by the lack of unbundled access to the dark fiber loop network elements in light of the limited availability of alternative dark fiber and the relative cost, relative timeliness of deployment, relative quality, and impact on network operations associated with the use of alternative network elements.

2. CLECs Continue to Be Impaired In Regard to Dark Fiber Loops

In the RBOC worldview, it appears that in a mere three years, the monopoly over last-mile fiber facilities that ILECs have held almost since the very first fiber was deployed has suddenly been eliminated. For instance, SBC suggests that in the past three years, CLECs have significantly expanded their local fiber networks.[88] The RBOCs devote much time to chronicling

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[86] Verizon, at * 14.

[87] Comments of Sprint, CC Dockets No. 01-338, 96-98, 98-147 at 21 (April 5, 2002) ("Sprint Comments").

[88] SBC Comments, at 98.

the relative ease with which CLECs can add commercial buildings to their networks, obtain municipal rights of way, and penetrate not only urban but suburban and rural markets as well.

As demonstrated below, the marketplace reality is much different. There are many real world barriers that are obscured by the ILECs that impair the CLECs' ability to deploy fiber facilities, including: the estimated $200,000 to $528,000 per mile costs of fiber deployment in dense urban areas;[89] municipal rights of way issues, licensing and the coordination of "street digs" which can cause serious deployment delays; high municipal fees and other onerous conditions placed upon CLECs, local moratoria on fiber deployment, collocation costs and delays, and the closure of financial markets to CLECs.[90]

In fact, far from witnessing the end of the ILEC monopoly over last mile high-capacity loop facilities, the last three years has demonstrated just how intractable the ILEC monopoly is. CLECs have invested an estimated $55 billion in their networks and operations and still have only been able to make a small dent in the ILECs' monopoly over last mile facilities. CLECs have been only able to deploy an estimated 272,384 high-speed wireline loops.[91] In fact, as demonstrated below, CLECs have found that the overbuilding of ILEC loop networks is a very expensive and time-consuming proposition.[92] In the vast majority of cases, CLECs still have to rely on essential ILEC last mile facilities to provide competitive service. It is clear that competitive deployment has not evolved to a stage that impairment in regard to these facilities

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[89] EPN Texas Report, at 35 ("EPN has seen that generally the costs for placement of fiber in metropolitan areas is approximately $100 per foot.").

[90] EPN Texas Report, at 30-40; Comments of WorldCom, Inc., CC Dockets No. 01-338, 96-98, 98-147, at 19-22 (April 5, 2002) ("WorldCom Comments").

[91] Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, CC Docket No. 98-146, Third Report, Appendix C, Table 5 (Feb. 6, 2002).

has been lessened. Furthermore, it would be wasteful and economically inefficient to require CLECs to self-deploy these facilities.

3. Alternative Sources of Dark Fiber Loops Are Rarely Available, Let Alone Ubiquitously Available

Contrary to RBOC assertions, the availability and ubiquity of competitive high-capacity fiber loop facilities has not increased, much less dramatically increased during the past three years. The purported dramatic increase in competitive facilities is mere smoke and mirrors on the part of the RBOCs. For instance, SBC relies on its contention that CLECs have increased their fiber route miles by 184,000 route miles, the majority of which are local route miles.[93] This says nothing about the amount of CLEC local loop miles, however, because the ILECs have not provided any breakdown of how many CLEC fiber miles are actual local loop miles, as opposed to long-haul miles or local transport miles.

Moreover, the purported increase in CLEC fiber networks relied upon by the ILECs is also counter-intuitive given the large number of CLEC bankruptcies in the last year, particularly for competitive fiber providers. For instance, Metromedia Fiber Networks, one of the largest competitive fiber providers, declared bankruptcy on May 20th.[94] MFN was at the top of the RBOCs' UNE Fact Report Table that purportedly demonstrated the widespread availability of alternative sources of metropolitan fiber local networks.[95] Several of the other dark fiber providers that the ILECs discuss in their UNE Fact Report have entered bankruptcy proceedings

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[92] EPN Texas Report, at 35 ("EPN has seen that generally the costs for placement of fiber in metropolitan areas is approximately $100 per foot," and fiber takes a minimum of six to eight months to build.).

[93] SBC Comments, at 98; UNE Fact Report, at III-6.

[94] Communications Daily, Vol. 22, No. 98 at 7 (May 20, 2002).

[95] UNE Fact Report, at III-12.

including, but not limited to, Williams Communications,[96] Global Crossings,[97] Telergy, and Yipes.[98] Several other fiber providers whose networks are likely included in the RBOCs' claim that CLECs have deployed an additional 184,000 miles of fiber have also gone bankrupt. For example, XO Communications, Inc. which claims to possess domestic and metro area networks that span 40 major U.S. cities, filed a voluntary petition to reorganize under Chapter 11 of the Bankruptcy Code on June 17, 2002.[99] ACSI Network Technologies, Inc. which purports to possess dark fiber in 37 cities across the U.S, including a 180 mile fiber optic network in Dallas, Texas has also filed for bankruptcy.[100]

It is extremely risky to purchase dark fiber facilities from these bankrupt or near bankrupt carriers because a bankruptcy filing could be followed by a discontinuance of service. Most importantly, a bankruptcy filing casts doubt on the enforceability of a carrier's ownership and use rights in Indefeasible Rights of Use agreements ("IRUs") for dark fiber. Because of the uncertainties regarding the validity of IRUs in a bankruptcy scenario, these bankrupt or near bankrupt alternative providers of fiber facilities cannot be considered a true alternative to ILEC fiber.[101]

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[96] Williams Communications to Complete Financial Restructuring and Reduce Debt by Approximately $6 Billion Through a Negotiated Chapter 11 Filing, Press Release, April 22, 2002.

[97] Simon Romero, J.P. Morgan Cited in Failure of a Global Crossing Bid, N.Y. Times, May 31, 2002 (Global Crossings filed for bankruptcy protection in January 2002).

[98] Yipes Files for Voluntary Reorganization: Company Commits to Supporting Customers and Services During Restructuring, Press Release, March 22, 2002.

[99] XO Communications Initiates Dual Track Chapter 11 Filing to Implement Recapitalization, Press Release, June 17, 2002.

[100] EPN Texas Report, at 41. ACSI is a wholly owned subsidiary of e.spire Communications, Inc. which filed for bankruptcy on March 22, 2001. E.spire Files Voluntary Petition for Chapter 11 Bankruptcy Protection, Press Release, March 22, 2001.

[101] Allegiance Comments, at 30; EPN Texas Report, at iii ("certain carriers are simply not viable providers of dark fiber facilities since they lack the financial health to ensure EPN that facilities will be available from these carriers for the duration of the contract period.").

The RBOC figures about the state of competition for loops simply fail to add up. For instance, SBC contends that CLECs serve 13 to 20 million business lines, but have obtained only about 1.5 million stand alone unbundled loops to serve business customers. SBC, thus, contends that CLECs are using alternative facilities to serve 85 to 95% of their lines. CLECs, however, have only captured 15% of the special access market. Clearly, if alternative loop facilities were prevalent, the competitive share of the special access market would be much more extensive. Given the bankruptcy of wholesale fiber providers such as MFN, Williams, Yipes, XO Communications and Telergy, it is unlikely that the competitive fiber providers are the source of these alternative facilities. More likely than not, the dominant source of the alternative high-capacity loop facilities is ILEC special access services.

Verizon appears to acknowledge this fact by suggesting special access channel terminations can be considered an alternative source of fiber loops and that its availability "precludes a generalized claim of impairment regarding high-capacity loops."[102] The Commission already rejected this argument raised in regard to dedicated transport in the *UNE Remand Order* noting:

> US West maintains that it need not unbundle local transport because requesting carriers can purchase its tariffed special access services. In light of the little weight we assign to the availability of resold services in our analysis, we reject US West's argument. This argument would foreclose competitive LECs from taking advantage of the distinct opportunity Congress gave them, through section 251(c)(3), to use unbundled network elements.[103]

There is no reason for the Commission to change its position on the issue. At any rate, special access services are not a suitable alternative to fiber loops given the high price for such facilities,

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[102] Verizon Comments, at 119.

[103] UNE Remand Order at ¶ 67.

poor ILEC provisioning of the facilities, and exorbitant termination liability penalties attached to the services. The primary reason that CLECs have relied on these services in the past is the plethora of problems they have encountered in obtaining high-capacity UNE facilities.[104]

The Commission must scrutinize the RBOC statistics and determine how many high-capacity fiber loops are actually being provisioned or leased by competitors and how many are actually being leased from ILECs as special access services in specific areas. Since the RBOCs have failed to establish that CLECs are provisioning their own loops in significant quantities, or that there are ample alternative sources of loops, it is likely that the only alternative to UNE high-capacity loops are ILEC special access services. The fact that some end users may generate sufficient traffic to justify the purchase of these facilities as special access facilities does not mean that this is an economically desirable result. In a competitive market, the cost of the high-capacity facilities would approach the forward-looking cost of the facility. Today, however, the cost of special access facilities remain significantly greater than the forward-looking cost even where ILECs have obtained pricing flexibility. By allowing CLECs to lease these facilities as UNEs, which as the Commission noted is an "opportunity Congress gave them," at forward looking prices, the costs of these facilities will gravitate to their forward-looking cost. Requiring CLECs to purchase loops via special access tariffs will only ensure that end users continue to play inflated costs for these vital facilities.

[104] Joint CLEC Comments, at 66.

4. Dark Fiber Loops From Providers Other Than the ILEC Are Not Available At the Overwhelming Majority of Commercial Office Buildings

The RBOCs contend that CLEC are able to serve a large number of commercial office buildings with their own high-capacity loops, including fiber loops. BellSouth puts the number at 175,000, which it claims represents 25% of all commercial buildings.[105] It is unclear how the RBOCs derived these numbers because by their very admission they note that they do not know how many commercial buildings or business customers the CLECs serve. Specifically, Verizon observes that:

> CLECs do not report the number of commercial office buildings or business customers they serve over their fiber networks. Accordingly, it is difficult to determine exactly how many commercial office buildings connect to alternative high-capacity loop facilities.[106]

Thus, by their own admission the RBOC numbers are mere speculation at best. This, of course, does not stop the RBOCs from throwing out these figures in support of their contention that CLECs are not impaired without access to high-capacity facilities, including dark fiber loop facilities.

In contrast to the 25% alleged by BellSouth, AT&T's data indicates that CLECs have penetrated less than 6% of commercial buildings, and for most of those buildings CLECs are able to serve only particular floors or customers.[107] Independent investment professionals estimate that in the near term no more than 30,000 to 60,000 buildings will be addressed by CLEC fiber extensions.[108] The much higher 175,000 figure put forward by the RBOCs is

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[105] BellSouth Comments, at 62-63.

[106] Verizon Comments, at 115.

[107] AT&T Comments, at 152.

[108] AT&T Comments, at 152.

overstated because the RBOCs merely added together the "buildings penetrated" for each CLEC, thereby assuming that no building is served by more than one CLEC, while in most cases multiple CLECs will be serving the same building.[109] In addition, the RBOC figure includes buildings that are passed as being "on-net" regardless of whether CLECs are able to access those buildings by obtaining the necessary rights-of-way or building access arrangements.[110] Sprint actually created a database showing buildings served by what it terms Alternative Access Vendors ("AAVs") and found that AAVs only serve a fraction of commercial office buildings compared to the near complete reach of the ILEC.[111] AT&T notes that it is able to connect only about 6,000 buildings on its network out of the more than 3 million commercial buildings in the U.S., and for those buildings, in most instances it can only serve a particular customer in the building rather than the entire building.[112] Thus, the amount of buildings served is not really a true indicator of competitive inroads, as CLECs may be only serving one customer in many of those buildings, while the ILEC serves all the rest of the customers.

EPN's experience in Texas demonstrates that dark fiber loops are rarely available from providers other than the ILEC in the four major metropolitan areas in which it operates in Texas. Specifically, the percentage of commercial buildings that are accessible using dark fiber loop facilities from alternative providers is at best an average of 2.02% for the four large Texas metropolitan areas that were studied.[113] The 2.02% average overstates the actual availability of dark fiber loops from alternative providers because the analysis assumes that the fiber providers

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[109] AT&T Comments, at 153.

[110] AT&T Comments, at 153.

[111] Sprint Comments, at 23.

[112] AT&T Comments, at 152.

[113] EPN Texas Report, at iv.

are connecting to different buildings when in fact they are often serving the same building locations in major business districts.[114] In smaller cities, suburban and rural areas the percentage of buildings that can be accessed using dark fiber facilities from alternative providers is likely to be much lower because nearly all alternative fiber providers have rationally elected to focus their efforts on markets with the highest traffic density.

As noted above, the findings of the EPN Texas Report regarding the limited number of buildings served by CLEC fiber are confirmed by the CGC Study. The CGC Study, for example, determined that in Corpus Christi, Texas, only 18 buildings were connected with CLEC fiber out of 7,390 establishments in the MSA; and in Albany, New York, only 24 buildings were connected with CLEC fiber out of 16,616 establishments in the MSA.[115] Moreover, the CGC Study also determined that in the cities examined in the Study, including Albany, Augusta, Boston, Chicago, Corpus Christi, and Portland, none of the CLECs studied in these markets offered dark fiber or wholesale fiber loops for sale or lease to other CLECs.[116]

In addition, as WorldCom notes, the ability to serve a particular commercial office building does not mean that a CLEC will be able to fully meet the needs of a business customer. Most businesses will have multiple locations, and not all of them will generate the same amount of traffic.[117] Thus, even if a CLEC can add one building to its network, the CLEC will still most likely have to rely on unbundled loops to serve the other locations.[118]

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[114] EPN Texas Report, at 11-14; Attachments I and II.

[115] CGC Consulting, State of CLEC Competition, at 6-7, Table 3 July 17, 2002 ("CGC Study").

[116] CGC Study, at 7, Table 3.

[117] WorldCom Comments, at 14.

[118] WorldCom Comments, at 18.

5. Self-Provisioning Fiber Loops Is Not Economically Viable For Most Customer Locations

SBC contends that CLECs can routinely extend their network to serve new buildings and customers.[119] This process is far from routine. It costs WorldCom on average $250,000 to add a building to its network, and that is only in the rare instance where the building is within a mile of its network. Otherwise, the building will only be added as part of the construction of a new ring, which is a multimillion dollar project.[120] Accordingly, WorldCom will only consider adding a building to its network if demand in that building is greater than a DS-3, which is very rare.[121]

Even if such demand exists, CLECs face the hurdle of getting the building owner to allow access to the building. The price of such access is usually unreasonable fees or high rents.[122] WorldCom reports that one landlord is seeking $100,000 per year simply for the CLEC to access the building.[123] As set forth in detail in the EPN Texas Report, EPN has found that the fees demanded by landlords to access a building can range from a few thousand dollars to a few hundred thousand dollars.[124] For example, at one high-rise in Dallas, Texas the property owner demanded an initial fee of $10,000 from EPN to enter the building as well as a monthly recurring charge of $3,000.[125] In Houston, one property owner at a major high-rise demanded a monthly recurring fee of more than $15,000, while another property owner imposed a building entrance

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[119] SBC Comments, at 99; see also, Verizon Comments, at 116.

[120] WorldCom Comments, at 19.

[121] WorldCom Comments, at 19.

[122] WorldCom Comments, at 20.

[123] WorldCom Comments at 20.

[124] EPN Texas Report, at 33, 31-33.

[125] EPN Texas Report, at 32.

fee of $12,000 plus a monthly recurring fee of over $2,000. Generally, the landlords do not require SBC and other ILECs to pay these fees.[126]

The high cost of adding buildings to a network coupled with the downturn in capital markets will ensure that whatever pace of "building adds" may have existed before will be significantly curtailed.[127] Investors have grown increasingly wary of carriers that invest heavily in their own facilities before the requisite customer base has been secured.[128] Thus, CLECs are caught in a Catch-22. They cannot add new buildings without a substantial customer base, but they cannot build a customer base without adding new buildings. The ILECs meanwhile do not face this dilemma because they already have fiber deployed to most commercial buildings in their region and already have secured rights to access these buildings from the landlord at no cost.[129]

Time also works against the CLEC. Even if the CLEC has the requisite funding in place, it must first obtain a municipal right of way, and then a right of way from the landlord in order to deploy its own fiber. Some landlords refuse to grant CLECs access, others only grant it at an excessive price, and limit access to serving the particular customer.[130] In EPN's experience it typically takes four to six months to negotiate a building entrance agreement with the property owner.[131] After securing a building entrance agreement and paying the access fees, construction

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[126] EPN Texas Report, at 32.

[127] WorldCom Comments at 20.

[128] Sprint Comments at 22.

[129] EPN Texas Report, at 32-33.

[130] EPN Texas Report, at 31-33; AT&T Comments, at 146.

[131] EPN Texas Report, at 30-31, 35.

for even a minor fiber job generally takes more than four months to complete.[132] Thus, at a minimum, it generally takes a CLEC eight to nine months to construct a network spur to add a building to its network, and that is if it is able to secure the rights-of-way without much difficulty.[133] Meanwhile, the ILEC since it already has the facility in place and already has access, can provide the facility in a matter of days.[134] As AT&T demonstrates, most customers "do not approach CLECs until they need capacity on short notice," thus, customers "are generally unwilling (or unable) to wait for the CLEC to complete the lengthy building process, especially since the ILEC can usually meet their needs immediately with its existing, ubiquitous network."[135] In fact, EPN has lost at least 313 customers in Austin, Dallas-Fort Worth, Houston, and San Antonio, because fiber facilities could not be obtained from either SBC, an alternative carrier, or in a timely and economically viable fashion through self-provisioning.[136]

As noted above, the Supreme Court specifically identified loop network elements as elements that are "very expensive to duplicate" and observed that entrants may need to share the ILEC loop elements.[137] The millions of commercial buildings that are not reached by competitive networks, the exorbitant cost of adding buildings to a network, the rights of way and building access rights that need to be negotiated, and the fact that ILECs have facilities currently serving these buildings counsel for the continued unbundling of these fiber loop facilities,

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[132] EPN Texas Report, at 31.

[133] EPN Texas Report, at 30-31, 35; see, WorldCom Comments, at 20.

[134] WorldCom Comments, at 20; AT&T Comments, at 147.

[135] AT&T Comments, at 147 ("even if the ILEC has to increase its capacity to serve the new customer demand, it can generally do so by adding electronics to the existing in-place facilities, without having to obtain permission from any third party or to construct additional [fiber] cables.").

[136] EPN Texas Report, at iv, 43-44.

[137] Verizon, 2002 WL 970643, *23, n. 27.

including dark fiber loop facilities. As an economic and practical matter, it makes no sense to require a CLEC to overbuild these facilities.

B. CLECs Are Presumptively Materially Impaired In Their Ability to Provide Services Without Access to Unbundled Dark Fiber Transport

1. The RBOCs Grossly Overstate the Availability of Alternative Fiber Transport

The RBOCs claim that "there has been a dramatic increase in the fiber supplied by alternative wholesale suppliers, which typically sell or lease dark fiber to other carriers."[138] As evidence of this dramatic increase, the RBOCs claim that "[t]oday, CLEC networks consist of at least 184,000 route miles of fiber (both local and long-haul)."[139] As demonstrated above, the RBOCs have grossly overstated the amount of fiber that is available from alternate suppliers. First, the RBOCs statistics contain numerous errors, for example overstating the amount of fiber that EPN plans to deploy, and the RBOCs have completely ignored the impact of CLEC bankruptcies and the closure of capital markets on CLEC plans to deploy fiber. Further, as demonstrated above, the RBOCs ignore the fact that obtaining dark fiber from bankrupt or nearly bankrupt providers is extremely risky due to the uncertain treatment of IRUs by bankruptcy courts and the possibility of a discontinuance of service. The RBOCs also conveniently ignore the fact that many CLECs that have deployed fiber, such as Time Warner and AT&T, do not lease this dark fiber to other CLECs.[140]

Contrary to the assertions of the RBOCs, fiber from alternative providers, to the extent that it exists, is largely limited to inter-city long haul networks, and does not encompass the vast

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[138] UNE Fact Report, at III-8, III-12 to 14, Tables 5-7.

[139] UNE Fact Report, at III-6.

[140] EPN Texas Report, at iii, 3, 12.

majority of intra-city, interoffice routes.[141] In fact, when RBOCs state that the majority of the 184,000 fiber route miles deployed are local, this is based on their erroneous interpretation of public disclosures made by CLECs as to what type of fiber they deploy.[142] Tellingly, the RBOCs do not proffer a figure for local fiber. Also, RBOCs do not demonstrate that the fiber route miles cited by them is the amount of fiber actually deployed as opposed to planned deployment, which given the current state of capital markets will mean that the fiber will not be deployed in the near future, if at all. SBC contends that in the past three years, the number of CLEC fiber networks has increased from 1,100 to nearly 1,800.[143] This number is rendered all the more surprising considering that the number of operational CLECs has recently plunged from about 300 to 150.[144]

At any rate, even if the RBOC figures are taken at face value, which they should not be, the ILEC networks dwarf the networks of CLECs.[145] For instance, AT&T, one of the largest CLECs, has deployed only 17,000 route miles of local fiber compared with 362,000 route miles of ILEC fiber.[146] For the vast majority of its routes, AT&T must rely on ILEC facilities.[147] This is the case for other CLECs as well.[148] For example, Cbeyond states it does not have an

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[141] Joint CLEC Comments, at 64-65.

[142] UNE Fact Report at III-6, n. 27.

[143] Comments of SBC, at 85; UNE Fact Report, at III-7.

[144] WorldCom Comments, at 21.

[145] Comments of WorldCom, Inc. at 16.

[146] AT&T Comments, at 150.

[147] AT&T Comments, at 151.

[148] AT&T Comments, at 151, citing comments of Advanced Telecom Group, Allegiance, Cbeyond, El Paso, Focal, McLeod, NuVox, Penn Telecom and WorldCom in High-Capacity proceeding.

alternative to BellSouth for high-capacity loops.[149] The same is true for Penn Telecom in the Verizon region, and CTC Exchange in its region.[150]

The RBOCs suggest that a multitude of utilities are now deploying large amounts of fiber.[151] It appears that the RBOCs have not updated their so-called UNE Fact Report to reflect present 2002 realities. For instance, the UNE Fact Report still states that El Paso has plans to spend $2 billion to deploy a nationwide fiber network.[152] In fact, El Paso has since scaled back its network deployment plans significantly and plans to focus solely on the Texas market.[153]

The RBOCs also trumpet the presence of collocation hotels.[154] For instance, Verizon contends that CLECs can obtain access to competitive fiber transport merely by collocating in one of these collocation hotels.[155] As with the presence of fiber-based collocators in an ILEC central office, evidence of the presence of collocation hotels does nothing to indicate that there are alternative sources of fiber on a particular route. Unless the number of collocation hotels mirror the thousands of ILEC wire centers, the ubiquity of the ILEC networks will not be matched. And unless the area served by the collocation hotel has sufficient demand to justify the deployment of alternative facilities the same obstacles to self-deployment of transport will remain.

Even if CLECs are able to duplicate portions of the ILEC's ubiquitous network, CLECs still cannot replicate the physical diversity that ILECs routinely offer. For instance, ILECs often

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[149] Id.

[150] Id. at 151-152.

[151] BellSouth Comments at 93; SBC Comments at 86.

[152] UNE Fact Report, at III-13.

[153] Joint CLEC Comments, at 55, n. 156.

[154] Verizon Comments at 107; BellSouth Comments at 95.

have multiple fiber routes to serve customers so that if there is a problem on one route the customer will not lose service. Since CLECs have a long way to go in deploying the initial routes, deploying diverse routes is even more remote. Yet customers consider diversity an essential attribute of acceptable service quality and routinely demand diversity.[156]

The ILEC statistics as to the presence of fiber-based collocators also fail to demonstrate that alternative fiber facilities are available.[157] Even with the presence of a competitive fiber provider ("CFP") in a central office, CLECs still encounter much difficulty in gaining access to the CFP.[158] The RBOCs, however, continue to trumpet the presence of a fiber-based collocator as demonstration of surrogate transport facilities.[159] The existence of a single "fiber-based collocator" in those central offices does nothing to show the availability of that fiber to other CLECs or of other alternatives in the remaining ILEC central offices. For most CLECs, the ILEC is the only source of these fiber loop and transport facilities in the markets in which they operate.[160] Further, even in the rare instances where CLECs have access to another collocated CLEC's spare fiber, it often takes the ILEC months to make the connection necessary for the CLEC to use such alternative fiber.[161]

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[155] Verizon Comments at 107.

[156] AT&T Comments, at 144.

[157] Joint CLEC Comments at 68-69.

[158] Joint CLEC Comments at 69.

[159] SBC Comments at 86; CC Docket No. 01-338, Comments of BellSouth Corporation at 91 (Apr. 8, 2002); CC Docket No. 01-338, Comments of the Verizon Telephone Companies at 106 (Apr. 8, 2002).

[160] Broadslate/Network Plus/RCN/Telergy High Cap Comments at 26.

[161] Id.

In sum, the RBOCs have grossly overstated the availability of fiber, including dark fiber, transport from alternative sources. The fact remains that dark fiber transport is rarely available from alternative providers.

2. Usually It Is Not Economically Viable or Practical For CLECs to Self-Provision Dark Fiber Transport Facilities On a Scale Sufficient To Support Their Business Plans

Self-provisioning of fiber facilities is not an economically viable alternative to using RBOC provided dark fiber in vast majority of cases. Self-provisioning of dark fiber is not economically viable because of the following issues:[162]

- *High Construction Costs:* In EPN's experience, the cost of placing fiber in a metropolitan area is generally $100.00 per foot. Accordingly, at best a fiber build of ten miles costs approximately $4.5 million.[163]

- *Timeliness:* Dark Fiber facilities generally take a minimum of six to eight months to construct. Accordingly, such facilities cannot be constructed in a timely fashion to meet emergent customer demand. With their existing ubiquitous networks developed in a monopoly environment, ILECs do not face this constraint and often win customers based on this factor alone.[164]

- *Building access:* Many building owners view a CLEC's request to construct facilities as an opportunity to glean excessive profits, or otherwise impede access. Moreover, negotiations with Building owners are a source of frequent delay in meeting customer demand. ILECs do not face this constraint.[165]

- *Ubiquity is not economically viable:* No CLEC, including EPN and CTC, can possibly raise the capital to construct the extensive footprint that a CLEC needs to compete as a wholesale carrier or regional CLEC.

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[162] EPN Texas Report, at 30-40.

[163] EPN Texas Report, at 35.

[164] EPN Texas Report, at 35.

[165] EPN Texas Report, at 31-33.

(a) High Construction Costs

EPN's experience in Texas has been that the costs for placement of fiber in a metropolitan area is approximately $100.00 per foot.[166] In addition to the high cost of building out fiber, the cost of building access is also high. In some instances, property owners are demanding over $15,000 in up front fees to enter a building and charge rates of up to $250.00 per inch for vertical riser space and $100.00 per inch for horizontal riser space per month.[167] Accordingly, in EPN's experience a fiber build of 10 miles at $100.00 per foot results of build-out costs of approximately 4.5 million dollars for placing the fiber in the ground.[168] If the customer to which the fiber was built obtained a single DS3 from EPN, which has a market price of approximately $2,400.00 per month it would take over *150 years* for EPN to recover the cost of this initial fiber build.[169] Obviously, it is not economically viable for EPN to self-provision fiber under these conditions.

The experience of other CLECs supports the Dark Fiber Commenters' position that it is rarely economically viable for CLECs to self-provision dark fiber. WorldCom, for example, reports that to add a central office to its network would cost at least $1 million, and the cost would be substantially more if the central office is located several miles from its existing network, which is often the case.[170] WorldCom has customers that utilize DS-1 or higher bandwidth in 6800 ILEC wire centers, "the vast majority of which are not served by CLEC

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[166] EPN Texas Report, at 35.

[167] EPN Texas Report, at 35.

[168] EPN Texas Report, at 35.

[169] EPN Texas Report, at 35.

[170] WorldCom Comments, at 21 ("the extension of WorldCom's local network to an additional ILEC central office generally costs at least $1 million").

transport."[171] For a CLEC to extend its network to so many wire centers would take years. The CLEC would also have to collocate in all those central offices, which imposes a separate very significant cost. Given the closed capital markets, if the Commission denied access to unbundled dark fiber transport, customers served in thousands of wire centers would lose competitive alternatives.

The ILECs possess a tremendous advantage in economies of scale and scope in deploying fiber. Since ILECs already have substantial demand, and have in-place fiber facilities, ILECs can serve customers at a much lower cost than a CLEC that would have to self-deploy facilities.[172] In addition, since ILECs already have a substantial amount of fiber facilities in place, they can add capacity simply by adding electronics to the fiber. Thus, their incremental costs are much lower than the CLEC who would have to deploy new fiber and then the electronics to serve additional customers.[173] The costs of deploying new fiber facilities are generally held to be at least approximately $200,000-$300,000 per mile in densely populated areas and transport equipment cost may exceed $300 per line.[174] In addition to these costs the CLEC must incur collocation costs that will range from $15,000 to $500,000.[175] These are all up-front costs incurred before customers are served. This funding may have been attainable in the heady days of easy access to capital, however, at present the capital markets are virtually closed to CLECs.[176] Thus, network expansion opportunities will be very limited. BellSouth

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[171] WorldCom Comments, at 78.

[172] AT&T Comments at 128.

[173] AT&T Comments at 130.

[174] AT&T Comments, at 126; UNE Remand Order, at ¶ 356.

[175] AT&T Comments, at 126; UNE Remand Order, at ¶ 357.

[176] WorldCom Comments at 21; AT&T Comments at 141.

suggests that metropolitan fiber suppliers are still obtaining capital.[177] Even if this was the case in early 2001, which is the time frame of the capital disbursements to which BellSouth refers, it is undeniable that the capital markets have essentially closed to wholesale fiber providers in 2002. As the Commission has noted, "a large cost disparity (whether indicative of a natural monopoly or not) might be probative of impairment."[178]

At these costs, deploying facilities is only viable where the CLEC has sufficient customer demand to justify this fiscal outlay, and capital to support the expansion. Even then the demand will be only sufficient if traffic is aggregated from several offices to one central location from which it can deploy the fiber. Even large carriers will not often have sufficient demand to justify a fiber build.

For example, AT&T currently has special access circuits in place to 11,500 of the approximately 14,000 ILEC central offices. For 70% of these offices, AT&T has insufficient traffic to fill a single DS-3 facility to reasonable levels of utilization.[179] And since AT&T is a carrier with a significant amount of long distance traffic, other CLECs with lesser amounts of traffic would find it even more infeasible to self-deploy fiber transport, which typically operates at least at an OC-48 level. AT&T noted that even with its amount of traffic the only way it can economically deploy fiber is if it aggregates its traffic from several central offices to a central location from which it can deploy fiber.[180] Even when CLECs deploy a fiber ring they still need

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[177] BellSouth Comments, at 93.

[178] FCC Petition for Rehearing at 13.

[179] AT&T Comments at 135.

[180] AT&T Comments at 136.

ILEC facilities to get the traffic from the customers' premises to the serving wire center and then interoffice transport to get to hubs where the ring is located.[181]

(b) Timeliness

The time to deploy fiber facilities is also a significant issue in serving customers.[182] EPN's experience is that it takes a minimum of six months to build fiber facilities and four to six months to negotiate a building entrance agreement with the building owner.[183] CLECs face the additional prospect of significant delays to obtain municipal rights-of-way which ILECs already have obtained. ILECs, on the other hand have nearly ubiquitous networks and can often meet new customer demand by merely augmenting electronics on existing fiber at relatively low incremental costs and in a relatively short time frame.

The ILECs contend that CLECs are able to obtain municipal rights-of-way access as easily as ILECs do. SBC, for example, states that obtaining a municipal permit only takes a few months, and to the extent some municipalities take longer, this affects all carriers not just CLECs.[184] The ILECs' assertions are misleading. First, the ILECs already have a substantial amount of fiber, including dark fiber, in place, so municipal rights-of-way is not as much an issue for them.[185] CLECs, on the other hand, have to go to the municipalities and obtain the access.[186] Thus an ILEC can quickly extend service to a new customer while the CLEC, if it has

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[181] AT&T Comments at 149.

[182] Joint CLEC Comments at 70.

[183] EPN Texas Report, at 26, 35.

[184] SBC Comments at 94.

[185] AT&T Comments at 142.

[186] Verizon admits some municipalities have onerous franchise approval processes, but that there is no competitive impairment because ILECs and CLECs are equally affected. Verizon Comments at 111. This is not the case, however, as ILECs have already gone through the process and deployed their fiber. CLECs are impaired in the

to lay new fiber, will require months to be able to offer the same service. CLECs have documented the difficulties they have faced in getting such access including exorbitant fees, onerous conditions, and perks to the municipality.[187] Even worse, many communities have placed moratoria on new fiber deployment.[188] In some major areas, ROW and conduit exhaustion are major problems. For instance, Sprint had to wait two years to pull fiber through the Lincoln Tunnel.[189] And, even if ILECs did not enjoy a significant time advantage, CLECs would nonetheless be impaired under the statutory standard because of the numerous difficulties associated with obtaining municipal authorizations to construct new facilities.

As noted earlier, the ILECs have had the luxury of deploying their fiber networks over the course of many years and having that network funded by a captive rate base.[190] Moreover, their investments were protected under rate of return regulation and price cap regulation such that even when they made imprudent investment they were often able to recoup the cost. As a result, the ILECs have been able to deploy 220 million local loops and a transport network of 362,000 miles of fiber.[191] Meanwhile, CLECs have had to compete for available capital, which is becoming more scarce, and have had to build up a customer base from scratch. To expect CLECs to self-deploy their own fiber networks and compete on an equal footing with ILECs within a mere six years is unrealistic and is not contemplated by the Act. The presence of

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sense that to offer service to customers in new areas they have to clear this onerous process while the ILEC can deploy service in a few days.

[187] AT&T Comments at 143.

[188] AT&T Comments at 143.

[189] Sprint Comments at 23.

[190] AT&T Comments at 123.

[191] AT&T Comments at 123.

alternative competitive facilities demonstrates that CLECs will deploy facilities when it is prudent to do so.[192] The Commission should allow CLECs to continue this smart build strategy.

The marketplace realities of the past two years show how difficult it is for CLECs to deploy alternatives to the ubiquitous ILEC transport network. This ILEC ubiquitous transport network would be very expensive to duplicate and has ample spare capacity. It makes no economic sense for CLECs to devote precious and scare capital to duplicating this network. Such capital would be better served in finding innovative technologies to fuel different services that would be transported over these transmission facilities or to deploy facilities in areas where self-provisioning would be more cost effective for the CLEC.

IV. THE FCC SHOULD CLARIFY ITS RULES REGARDING DARK FIBER IN ORDER TO PREVENT ILECS FROM EVADING THEIR OBLIGATION TO PROVIDE UNBUNDLED DARK FIBER

Once the Commission determines that CLECs are impaired without access to dark fiber, both in the loop and the interoffice portion of the ILEC network, it is necessary for the Commission to ensure that CLECs have meaningful access to this critical network element. Based upon their cumulative and extensive experience ordering UNE dark fiber from ILECs, the Dark Fiber Commenters' initial comments in this proceeding made several suggestions that the Commission should adopt to make access to the dark fiber UNE meaningful. As explained in the Dark Fiber Commenters' initial comments, from the time the Commission required ILECs to provide CLECs access to dark fiber on an unbundled basis, the ILECs, particularly the RBOCs, have not provided CLECs meaningful access to dark fiber in compliance with the Commission's

[192] AT&T Comments at 124.